1. Incident Name Dominguez Channel Mystery Oil Spill	2. Operational Period to be covered by IAP (Date/Time) From: 1800 12/22/10 To: 1800 12/25/10	CG IAP COVER SHEET

3. Approved by Incident Commander(s):

ORG	NAME	
USEPA	Jason Musante	USEPA
DFG	Bryan Gollhofer	#537 DFG-USEPA

INCIDENT ACTION PLAN

The items checked below are included in this Incident Action Plan:

- ☒ ICS 202-CG (Response Objectives)
- ☒ ICS 203-CG (Organization List) – OR – ICS 207-CG (Organization Chart)
- ☒ ICS 204-CGs (Assignment Lists)
  One Copy each of any ICS 204-CG attachments:
- ☐ ICS 205-CG (Communications Plan)
- ☒ ICS 206-CG (Medical Plan)
- ☒ ICS 208-CG (Site Safety Plan) or Note SSP Location _____
- ☐ Map/Chart
- ☒ Weather forecast / Tides/Currents

Other Attachments

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

4. Prepared by: B. Gollhofer **Date/Time** 12-22

1. Incident Name Dominguez Channel Mystery Oil Spill	2. Operational Period to be covered by IAP (Date/Time) From: 1800 12/23/10 To: 1800 12/24/10	CG IAP COVER SHEET

3. Approved by Incident Commander(s):

ORG	NAME
USEPA	Jason Musante
DFG	Bryan Gollhofer/Sau Garcia

INCIDENT ACTION PLAN

The items checked below are included in this Incident Action Plan:

- ☒ ICS 202-CG (Response Objectives)
- ☐ ICS 203-CG (Organization List) – OR – ICS 207-CG (Organization Chart)
- ☒ ICS 204-CGs (Assignment Lists)
  One Copy each of any ICS 204-CG attachments:
- ☐ ICS 205-CG (Communications Plan)
- ☒ ICS 206-CG (Medical Plan)
- ☒ ICS 208-CG (Site Safety Plan) or Note SSP Location _____
- ☒ Map/Chart
- ☒ Weather forecast / Tides/Currents

Other Attachments

- ☒ Incident Phone List
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

4. Prepared by:	Date/Time
F. Bizzell	12/23

1. Incident Name	2. Operational Period (Date/Time)	INCIDENT OBJECTIVES
Dominguez Channel Mystery Oil Spill	From: 1800 12/23/10 To: 1800 12/24/10	**ICS 202-CG**

3. Objective(s)

- SAFETY: Ensure the safety of all response personnel, facility employees, and public. See site safety plans for specifics

- ISOLATION AND DENY ENTRY: Keep all non response personnel out of response areas.

- NOTIFICATIONS: Notify proper aithorities of any significant changes in spill situations.

- ID AND HAZARD ASSESSMENT: See site safety plan.

- ACTION PLANNING: Maintain containment and remove oil at source, pump station and retention basin.

- PROTECTIVE EQUIPMENT: See site safety plan.

- CONTAINMENT AND CONTROL: Investigate possible sources and control when found.

- PROTECTIVE ACTIONS: Continually assess downstream impacts and potential protecive and recovery options (Marina's).

- DCONTAMINATION AND CLEANUP: Ensure proper decontamination of personnel and equipment.

- DISPOSAL: Dispose of all recovered as waste as law requires. Ensure that attached Waste Segregation Plan is followed.

- DOCUMENTATION: Ensure proper documentation of all response activities, waste and segregation, and costs associated.

4. Operational Period Command Emphasis (Safety Message, Priorities, Key Decisions/Directions)

- SHELL SOURCE AREA:
  - -Continue efforts to identify source.
  - -Continue recovery of surface product.
  - -Follow waste segregation and recovery plan and keep separate from other wastes.
- SHELL RETENTION BASIN:
  - -Pump as needed to reduce storm water levels.
  - -Assess cleanup issues and prepare plan.
  - -Assess wildlife issues.
- RR ROW OUTFALL RECOVERY:
  - -Continue skimming and recovery efforts to minimze downstream impacts to pump station.
  - -Assess cleanup issues to implement once source has been isolated.
- PUMP STATION:
  - -Continue recovery on surface water within vault.
  - -Pump down station as needed to reduce water levels and reduce possibility of flooding. Portable sump pumps as a possibility.
  - -Continue to assess.

Approved Site Safety Plan Located at:

5. Prepared by: (Planning Section Chief)	Date/Time
F. Bizzell	**12/23**

INCIDENT OBJECTIVES (ICS 202-CG)

Purpose. The Incident Objectives form describes the basic incident strategy, control objectives, command emphasis/priorities, and safety considerations for use during the next operational period.

Preparation. The Incident Objectives form is completed by the Planning Section following each Command and General Staff Meeting conducted in preparing the Incident Action Plan.

Distribution. The Incident Objectives form will be reproduced with the IAP and given to all supervisory personnel at the Section, Branch, Division/Group, and Unit levels. All completed original forms MUST be given to the Documentation Unit.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Operational Period	Enter the time interval for which the form applies. Record the start and end date and time.
3.	Objective(s)	Enter clear, concise statements of the objectives for managing the response. These objectives are for the incident response for this operational period and for the duration of the incident. Include alternatives.
4.	Operational Period Command Emphasis	Enter clear, concise statements for safety message, priorities, and key command emphasis/decisions/directions. Enter information such as known safety hazards and specific precautions to be observed during this operational period. If available, a safety message should be referenced and attached. At the bottom of this box, enter the location where approved Site Safety Plan is available for review.
	Site Safety Plan	Note location of the approved Site Safety Plan.
5.	Prepared By	Enter the name of the Planning Section Chief completing the form.
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).

NOTE: ICS 202-CG, Incident Objectives, serves as part of the Incident Action Plan (IAP)

1. Incident Name	2. Operational Period (Date/Time)	Assignment List
Dominguez Channel Mystery Oil Spill	From: 1800 12/23/10 To: 1800 12/24/10	**ICS 204-CG**

3. Branch	4. Division/Group/Staging
Recovery	**Storm Drain Recovery**

5. Operations Personnel Name Affiliation Contact # (s)

Operations Section Chief: Gary Wolfford EQM 714-269-5979

Branch Director:

Division/Group Supervisor/STAM: Gary Wolfford EQM 714-269-5979

6. Resources Assigned "X" indicates 204a attachment with additional instructions

Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# Of Persons	Reporting Info/Notes/Remarks	
Absorbent Boom.					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐

7. Work Assignments

- Remove sorbent boom at end of work day .

8. Special Instructions

-Read, understand, and follow site safety plan.
- Refer all media questions and concerns to Jason Musante @ 213-479-2120
- Report any stray dogs and transients to Cory Kong @ 562-477-7081
- Report all oiled wildlife to Cory Kong @ 562-477-7081

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio: Freq./System/Channel	Phone	Cell/Pager	
Gary Wolfford			714-269-5979	
Erik Ricardo			909-499-6959	

Emergency Communications

Medical 911 Evacuation Other

10. Prepared by:	Date/Time	11. Reviewed by (PSC):	Date/Time	12. Reviewed by (OSC):	Date/Time
F. Bizzell	12/23	F. Bizzell	12/23	**J. Musante**	12/23

ASSIGNMENT LIST (ICS 204-CG)

Purpose. The Assignment List(s) informs Division and Group supervisors of incident assignments. Once the Unified Command and General Staff agree to the assignments, the assignment information is given to the appropriate Divisions and Groups.

Preparation. The Assignment List is normally prepared by the Resources Unit, using guidance from the Incident Objectives (ICS 202-CG), Operational Planning Worksheet (ICS 215-CG), and the Operations Section Chief. The Assignment List must be approved by the Planning Section Chief and Operations Section Chief. When approved, it is included as part of the Incident Action Plan (IAP). Specific instructions for specific resources may be entered on an ICS 204a-CG for dissemination to the field. A separate sheet is used for each Division or Group. The identification letter of the Division is entered in the form title. Also enter the number (roman numeral) assigned to the Branch.

Special Note. The Assignment List, ICS 204-CG submits assignments at the level of Divisions and Groups. The Assignment List Attachment, ICS 204a-CG shows more specific assignment information, if needed. The need for an ICS 204a-CG is determined by the Planning and Operations Section Chiefs during the Operational Planning Worksheet (ICS 215-CG) development.

Distribution. The Assignment List is duplicated and attached to the Incident Objectives and given to all recipients of the Incident Action Plan. In some cases, assignments may be communicated via radio/telephone/fax. All completed original forms MUST be given to the Documentation Unit.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Operational Period	Enter the time interval for which the form applies.
3.	Branch	Enter the Branch designator.
4.	Division/Group/Staging	Enter the Division/Group/Staging designator.
5.	Operations Personnel	Enter the name of the Operations Chief, applicable Branch Director, and Division Supervisor.
6.	Resources Assigned	Each line in this field may have a separate Assignment List Attachment (ICS 204a-CG). Enter the following information about the resources assigned to Division or Group for this period:
	Identifier	List identifier
	Leader	Leader name
	Contact Information	Primary means of contacting this person (e.g., radio, phone, pager, etc.). Be sure to include area code when listing a phone number.
	# Of Persons	Total number of personnel for the strike team, task force, or single resource assigned.
	Reporting Info/Notes/ Remarks	Special notes or directions, specific to this strike team, task force, or single resource. Enter an "X" check if an Assignment List Attachment (ICS 204a-CG) will be prepared and attached. The Planning and Operations Section Chiefs determine the need for an ICS 204a-CG during the Operational Planning Worksheet (ICS 215-CG) development.
7.	Work Assignment	Provide a statement of the tactical objectives to be achieved within the operational period by personnel assigned to this Division or Group.
8.	Special Instructions	Enter a statement noting any safety problems, specific precautions to be exercised, or other important information.
9.	Communications	Enter specific communications information (including emergency numbers) for this division /group. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205-CG). Note: Phone numbers should include area code.
10.	Prepared By	Enter the name of the person completing the form, normally the Resources Unit Leader.
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).
11.	Reviewed by (PSC)	
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).
12.	Reviewed by (OSC)	Enter the name of the operations person reviewing the form, normally the Operations Section Chief.
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).

1. Incident Name	2. Operational Period (Date/Time)	Assignment List
Dominguez Channel Mystery Spill	From: 12/23/10 1800 To: 12/24/10 1800	**ICS 204-CG**

3. Branch	4. Division/Group/Staging
Recovery	**Pump Station**

5. Operations Personnel Name Affiliation Contact # (s)

Operations Section Chief: Garey Wofford, EQM, 714-269-5979

Branch Director:

Division/Group Supervisor/STAM: Garey Wofford, EQM, 714-269-5979

6. Resources Assigned "X" indicates 204a attachment with additional instructions

Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# Of Persons	Reporting Info/Notes/Remarks	▼
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐

7. Work Assignments
- Continue recovery on surface water within vault.
- Pump down station as needed to reduce water levels and reduce possibility of flooding.
- Install portable pumps for water removal.
-Place sorbent boom at spillway.

8. Special Instructions
- Read, understand, and follow site safety plan.
- Do not attempt to capture or approach oiled/injured wildlife. Notify an on-site DFG personnel or a member of the Unified Command.
- Read, understand, and follow site safety plan.
- Refer all media questions and concerns to Jason Musante @ 213-479-2120
- Report any stray dogs and transients to Cory Kong @ 562-477-7081
- Report all oiled wildlife to Cory Kong @ 562-477-7081

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio: Freq./System/Channel	Phone	Cell/Pager	
Garey Wofford			7159794-269-	
Erik Ricardo			909-499-6959	

Emergency Communications

Medical 911 Evacuation Other

10. Prepared by:	Date/Time	11. Reviewed by (PSC):	Date/Time	12. Reviewed by (OSC):	Date/Time
F.Bizzell	12/23	F.Bizzell	12/23		

ASSIGNMENT LIST (ICS 204-CG)

Purpose. The Assignment List(s) informs Division and Group supervisors of incident assignments. Once the Unified Command and General Staff agree to the assignments, the assignment information is given to the appropriate Divisions and Groups.

Preparation. The Assignment List is normally prepared by the Resources Unit, using guidance from the Incident Objectives (ICS 202-CG), Operational Planning Worksheet (ICS 215-CG), and the Operations Section Chief. The Assignment List must be approved by the Planning Section Chief and Operations Section Chief. When approved, it is included as part of the Incident Action Plan (IAP). Specific instructions for specific resources may be entered on an ICS 204a-CG for dissemination to the field. A separate sheet is used for each Division or Group. The identification letter of the Division is entered in the form title. Also enter the number (roman numeral) assigned to the Branch.

Special Note. The Assignment List, ICS 204-CG submits assignments at the level of Divisions and Groups. The Assignment List Attachment, ICS 204a-CG shows more specific assignment information, if needed. The need for an ICS 204a-CG is determined by the Planning and Operations Section Chiefs during the Operational Planning Worksheet (ICS 215-CG) development.

Distribution. The Assignment List is duplicated and attached to the Incident Objectives and given to all recipients of the Incident Action Plan. In some cases, assignments may be communicated via radio/telephone/fax. All completed original forms MUST be given to the Documentation Unit.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Operational Period	Enter the time interval for which the form applies.
3.	Branch	Enter the Branch designator.
4.	Division/Group/Staging	Enter the Division/Group/Staging designator.
5.	Operations Personnel	Enter the name of the Operations Chief, applicable Branch Director, and Division Supervisor.
6.	Resources Assigned	Each line in this field may have a separate Assignment List Attachment (ICS 204a-CG). Enter the following information about the resources assigned to Division or Group for this period:
	Identifier	List identifier
	Leader	Leader name
	Contact Information	Primary means of contacting this person (e.g., radio, phone, pager, etc.). Be sure to include area code when listing a phone number.
	# Of Persons	Total number of personnel for the strike team, task force, or single resource assigned.
	Reporting Info/Notes/ Remarks	Special notes or directions, specific to this strike team, task force, or single resource. Enter an "X" check if an Assignment List Attachment (ICS 204a-CG) will be prepared and attached. The Planning and Operations Section Chiefs determine the need for an ICS 204a-CG during the Operational Planning Worksheet (ICS 215-CG) development.
7.	Work Assignment	Provide a statement of the tactical objectives to be achieved within the operational period by personnel assigned to this Division or Group.
8.	Special Instructions	Enter a statement noting any safety problems, specific precautions to be exercised, or other important information.
9.	Communications	Enter specific communications information (including emergency numbers) for this division /group. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205-CG). Note: Phone numbers should include area code.
10.	Prepared By	Enter the name of the person completing the form, normally the Resources Unit Leader.
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).
11.	Reviewed by (PSC)	
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).
12.	Reviewed by (OSC)	Enter the name of the operations person reviewing the form, normally the Operations Section Chief.
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).

1. Incident Name	2. Operational Period (Date/Time)	Assignment List
Dominguez Channel Mystery Oil Spill	From: 1800 12/23/10 To: 1800 12/24/10	**ICS 204-CG**

3. Branch	4. Division/Group/Staging
Recovery	**RR ROW Outfall/Recovery**

5. Operations Personnel Name Affiliation Contact # (s)

Operations Section Chief: Gary Wolfford EQM 714-269-5979

Branch Director:

Division/Group Supervisor/STAM: Gary Wolfford EQM 714-269-5979

6. Resources Assigned "X" indicates 204a attachment with additional instructions

Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# Of Persons	Reporting Info/Notes/Remarks	
Vac Truck					☐
Baker Tank					☐
Baker Tank					☐
Baker Tank					☐
Baker Tank					☐
					☐
					☐
					☐
					☐
					☐
					☐

7. Work Assignments

- Install collection improvements(Underflow Dams)
- Continue street cleaning.

8. Special Instructions

- Read, understand, and follow site safety plan.
- Refer all media questions and concerns to Jason Musante @ 213-479-2120
- Report any stray dogs and transients to Cory Kong @ 562-477-7081
- Report all oiled wildlife to Cory Kong @ 562-477-7081

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio: Freq./System/Channel	Phone	Cell/Pager	
Gary Wolfford			714-269-5979	
Erik Ricardo			909-499-6959	

Emergency Communications

Medical 911 Evacuation Other

10. Prepared by:	Date/Time	11. Reviewed by (PSC):	Date/Time	12. Reviewed by (OSC):	Date/Time
F. Bizzell	12/23	F. Bizzell	12/23	**J. Musante**	12/23

ASSIGNMENT LIST (ICS 204-CG)

Purpose. The Assignment List(s) informs Division and Group supervisors of incident assignments. Once the Unified Command and General Staff agree to the assignments, the assignment information is given to the appropriate Divisions and Groups.

Preparation. The Assignment List is normally prepared by the Resources Unit, using guidance from the Incident Objectives (ICS 202-CG), Operational Planning Worksheet (ICS 215-CG), and the Operations Section Chief. The Assignment List must be approved by the Planning Section Chief and Operations Section Chief. When approved, it is included as part of the Incident Action Plan (IAP). Specific instructions for specific resources may be entered on an ICS 204a-CG for dissemination to the field. A separate sheet is used for each Division or Group. The identification letter of the Division is entered in the form title. Also enter the number (roman numeral) assigned to the Branch.

Special Note. The Assignment List, ICS 204-CG submits assignments at the level of Divisions and Groups. The Assignment List Attachment, ICS 204a-CG shows more specific assignment information, if needed. The need for an ICS 204a-CG is determined by the Planning and Operations Section Chiefs during the Operational Planning Worksheet (ICS 215-CG) development.

Distribution. The Assignment List is duplicated and attached to the Incident Objectives and given to all recipients of the Incident Action Plan. In some cases, assignments may be communicated via radio/telephone/fax. All completed original forms MUST be given to the Documentation Unit.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Operational Period	Enter the time interval for which the form applies.
3.	Branch	Enter the Branch designator.
4.	Division/Group/Staging	Enter the Division/Group/Staging designator.
5.	Operations Personnel	Enter the name of the Operations Chief, applicable Branch Director, and Division Supervisor.
6.	Resources Assigned	Each line in this field may have a separate Assignment List Attachment (ICS 204a-CG). Enter the following information about the resources assigned to Division or Group for this period:
	Identifier	List identifier
	Leader	Leader name
	Contact Information	Primary means of contacting this person (e.g., radio, phone, pager, etc.). Be sure to include area code when listing a phone number.
	# Of Persons	Total number of personnel for the strike team, task force, or single resource assigned.
	Reporting Info/Notes/ Remarks	Special notes or directions, specific to this strike team, task force, or single resource. Enter an "X" check if an Assignment List Attachment (ICS 204a-CG) will be prepared and attached. The Planning and Operations Section Chiefs determine the need for an ICS 204a-CG during the Operational Planning Worksheet (ICS 215-CG) development.
7.	Work Assignment	Provide a statement of the tactical objectives to be achieved within the operational period by personnel assigned to this Division or Group.
8.	Special Instructions	Enter a statement noting any safety problems, specific precautions to be exercised, or other important information.
9.	Communications	Enter specific communications information (including emergency numbers) for this division /group. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205-CG). Note: Phone numbers should include area code.
10.	Prepared By	Enter the name of the person completing the form, normally the Resources Unit Leader.
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).
11.	Reviewed by (PSC)	
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).
12.	Reviewed by (OSC)	Enter the name of the operations person reviewing the form, normally the Operations Section Chief.
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).

1. Incident Name	2. Operational Period (Date/Time)	Assignment List
Dominguez Channel Mystery Oil Spill	From: 1800 12/23/10 To: 1800 12/24/10	**ICS 204-CG**

3. Branch	4. Division/Group/Staging
Recovery	**Shell Retention Pond**

5. Operations Personnel Name Affiliation Contact # (s)

Operations Section Chief: Gary Wolfford EQM 714-269-5979

Branch Director:

Division/Group Supervisor/STAM: Gary Wolfford EQM 714-269-5979

6. Resources Assigned "X" indicates 204a attachment with additional instructions

Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# Of Persons	Reporting Info/Notes/Remarks	
Vac Truck					☐
Baker Tank					☐
Drum Skimmer					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐

7. Work Assignments

- Begin skimming and recovery operations in Shell storm water retention pond to minimize downstream impacts to pump station as necessary.
- Remove contaminated vegitation.
-Re-deploy sorbent in outfall channel.

8. Special Instructions

- Read, understand, and follow site safety plan.
- Refer all media questions and concerns to Jason Musante @ 213-479-2120
- Report any stray dogs and transients to Cory Kong @ 562-477-7081
- Report all oiled wildlife to Cory Kong @ 562-477-7081

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio: Freq./System/Channel	Phone	Cell/Pager	
Gary Wolfford			714-269-5979	
Erik Ricardo			909-499-6959	

Emergency Communications

Medical 911 Evacuation Other

10. Prepared by:	Date/Time	11. Reviewed by (PSC):	Date/Time	12. Reviewed by (OSC):	Date/Time
F. Bizzell	12/23	F. Bizzell	12/23	**J. Musante**	12/23

ASSIGNMENT LIST (ICS 204-CG)

Purpose. The Assignment List(s) informs Division and Group supervisors of incident assignments. Once the Unified Command and General Staff agree to the assignments, the assignment information is given to the appropriate Divisions and Groups.

Preparation. The Assignment List is normally prepared by the Resources Unit, using guidance from the Incident Objectives (ICS 202-CG), Operational Planning Worksheet (ICS 215-CG), and the Operations Section Chief. The Assignment List must be approved by the Planning Section Chief and Operations Section Chief. When approved, it is included as part of the Incident Action Plan (IAP). Specific instructions for specific resources may be entered on an ICS 204a-CG for dissemination to the field. A separate sheet is used for each Division or Group. The identification letter of the Division is entered in the form title. Also enter the number (roman numeral) assigned to the Branch.

Special Note. The Assignment List, ICS 204-CG submits assignments at the level of Divisions and Groups. The Assignment List Attachment, ICS 204a-CG shows more specific assignment information, if needed. The need for an ICS 204a-CG is determined by the Planning and Operations Section Chiefs during the Operational Planning Worksheet (ICS 215-CG) development.

Distribution. The Assignment List is duplicated and attached to the Incident Objectives and given to all recipients of the Incident Action Plan. In some cases, assignments may be communicated via radio/telephone/fax. All completed original forms MUST be given to the Documentation Unit.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Operational Period	Enter the time interval for which the form applies.
3.	Branch	Enter the Branch designator.
4.	Division/Group/Staging	Enter the Division/Group/Staging designator.
5.	Operations Personnel	Enter the name of the Operations Chief, applicable Branch Director, and Division Supervisor.
6.	Resources Assigned	Each line in this field may have a separate Assignment List Attachment (ICS 204a-CG). Enter the following information about the resources assigned to Division or Group for this period:
	Identifier	List identifier
	Leader	Leader name
	Contact Information	Primary means of contacting this person (e.g., radio, phone, pager, etc.). Be sure to include area code when listing a phone number.
	# Of Persons	Total number of personnel for the strike team, task force, or single resource assigned.
	Reporting Info/Notes/ Remarks	Special notes or directions, specific to this strike team, task force, or single resource. Enter an "X" check if an Assignment List Attachment (ICS 204a-CG) will be prepared and attached. The Planning and Operations Section Chiefs determine the need for an ICS 204a-CG during the Operational Planning Worksheet (ICS 215-CG) development.
7.	Work Assignment	Provide a statement of the tactical objectives to be achieved within the operational period by personnel assigned to this Division or Group.
8.	Special Instructions	Enter a statement noting any safety problems, specific precautions to be exercised, or other important information.
9.	Communications	Enter specific communications information (including emergency numbers) for this division /group. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205-CG). Note: Phone numbers should include area code.
10.	Prepared By	Enter the name of the person completing the form, normally the Resources Unit Leader.
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).
11.	Reviewed by (PSC)	
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).
12.	Reviewed by (OSC)	Enter the name of the operations person reviewing the form, normally the Operations Section Chief.
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).

1. Incident Name	2. Operational Period (Date/Time)	Assignment List
Dominguez Channel Mystery Oil Spill	From: 1800 12/23/10 To: 1800 12/24/10	**ICS 204-CG**

3. Branch	4. Division/Group/Staging
Recovery	**Shell Source Area**

5. Operations Personnel Name Affiliation Contact # (s)

Operations Section Chief: Gary Wolfford EQM 714-269-5979

Branch Director:

Division/Group Supervisor/STAM: Gary Wolford EQM 714-269-5979

6. Resources Assigned "X" indicates 204a attachment with additional instructions

Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# Of Persons	Reporting Info/Notes/Remarks	
Vac Truck					☐
Baker Tank					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐

7. Work Assignments

-Maintain containment and recovery of the oil releasing at the surface. Follow waste segregation and quanification plan for waste recovered, in baker tanks.
-Reduce footprint and build up sump protection.

8. Special Instructions

- In the event of rain it is permissible to dispose of waste recovered in facility tanks in the case of heavy rains. Coordinate with Shell personnel for this issue.
- Read, understand, and follow site safety plan.
- Refer all media questions and concerns to Jason Musante @ 213-479-2120
- Report any stray dogs and transients to Cory Kong @ 562-477-7081
- Report all oiled wildlife to Cory Kong @ 562-477-7081

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio: Freq./System/Channel	Phone	Cell/Pager	
Gary Wolford			714-269-5979	
Erik Ricardo			909-499-6959	

Emergency Communications

Medical Evacuation Other

10. Prepared by:	Date/Time	11. Reviewed by (PSC):	Date/Time	12. Reviewed by (OSC):	Date/Time
F.Bizzell	12-23	F. Bizzell	12/23	**J. Musante**	12/23

ASSIGNMENT LIST (ICS 204-CG)

Purpose. The Assignment List(s) informs Division and Group supervisors of incident assignments. Once the Unified Command and General Staff agree to the assignments, the assignment information is given to the appropriate Divisions and Groups.

Preparation. The Assignment List is normally prepared by the Resources Unit, using guidance from the Incident Objectives (ICS 202-CG), Operational Planning Worksheet (ICS 215-CG), and the Operations Section Chief. The Assignment List must be approved by the Planning Section Chief and Operations Section Chief. When approved, it is included as part of the Incident Action Plan (IAP). Specific instructions for specific resources may be entered on an ICS 204a-CG for dissemination to the field. A separate sheet is used for each Division or Group. The identification letter of the Division is entered in the form title. Also enter the number (roman numeral) assigned to the Branch.

Special Note. The Assignment List, ICS 204-CG submits assignments at the level of Divisions and Groups. The Assignment List Attachment, ICS 204a-CG shows more specific assignment information, if needed. The need for an ICS 204a-CG is determined by the Planning and Operations Section Chiefs during the Operational Planning Worksheet (ICS 215-CG) development.

Distribution. The Assignment List is duplicated and attached to the Incident Objectives and given to all recipients of the Incident Action Plan. In some cases, assignments may be communicated via radio/telephone/fax. All completed original forms MUST be given to the Documentation Unit.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Operational Period	Enter the time interval for which the form applies.
3.	Branch	Enter the Branch designator.
4.	Division/Group/Staging	Enter the Division/Group/Staging designator.
5.	Operations Personnel	Enter the name of the Operations Chief, applicable Branch Director, and Division Supervisor.
6.	Resources Assigned	Each line in this field may have a separate Assignment List Attachment (ICS 204a-CG). Enter the following information about the resources assigned to Division or Group for this period:
	Identifier	List identifier
	Leader	Leader name
	Contact Information	Primary means of contacting this person (e.g., radio, phone, pager, etc.). Be sure to include area code when listing a phone number.
	# Of Persons	Total number of personnel for the strike team, task force, or single resource assigned.
	Reporting Info/Notes/ Remarks	Special notes or directions, specific to this strike team, task force, or single resource. Enter an "X" check if an Assignment List Attachment (ICS 204a-CG) will be prepared and attached. The Planning and Operations Section Chiefs determine the need for an ICS 204a-CG during the Operational Planning Worksheet (ICS 215-CG) development.
7.	Work Assignment	Provide a statement of the tactical objectives to be achieved within the operational period by personnel assigned to this Division or Group.
8.	Special Instructions	Enter a statement noting any safety problems, specific precautions to be exercised, or other important information.
9.	Communications	Enter specific communications information (including emergency numbers) for this division /group. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205-CG). Note: Phone numbers should include area code.
10.	Prepared By	Enter the name of the person completing the form, normally the Resources Unit Leader.
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).
11.	Reviewed by (PSC)	
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).
12.	Reviewed by (OSC)	Enter the name of the operations person reviewing the form, normally the Operations Section Chief.
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).

1. Incident Name **Dominguez Channel Mystery Spill**	2. Operational Period (Date/Time) From: 12/23/10 1800 To: 12/24/10 1800	**Assignment List** **ICS 204-CG**
3. Branch **Wildlife Operations**	4. Division/Group/Staging **Wildlife**	

5. Operations Personnel Name Affiliation Contact # (s)

Operations Section Chief: Gary Wofford, EQM

Branch Director: Corey Kong, Department of Fish and Game Office of Spill Prevention and Response

Division/Group Supervisor/STAM: Corey Kong

6. Resources Assigned "X" indicates 204a attachment with additional instructions

Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# Of Persons	Reporting Info/Notes/Remarks	
Search and Recovery Team 1	Adam Ribota	714-931-8343	2	Shell Lube Training Center	☐
			2		☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐

7. Work Assignments

Search for and collect oiled/injured wildlife in spill area.

8. Special Instructions

- Read, understand, and follow site safety plan.
- Fill out daily search and recovery logs.
- Check in with on-site Wildlife Branch Director at 1000, 1300, and 1500.
- Finish all field operations by 1630.
- Refer all media questions and concerns to Jason Musante
- Report any stray dogs and transients to Cory Kong

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio: Freq./System/Channel	Phone	Cell/Pager	
Adam Ribota			714-931-8343	

Emergency Communications

Medical 911 Evacuation Other

10. Prepared by:	Date/Time	11. Reviewed by (PSC):	Date/Time	12. Reviewed by (OSC):	Date/Time
Corey Kong	12/23/10	F.Bizzell	12/23		

ASSIGNMENT LIST (ICS 204-CG)

Purpose. The Assignment List(s) informs Division and Group supervisors of incident assignments. Once the Unified Command and General Staff agree to the assignments, the assignment information is given to the appropriate Divisions and Groups.

Preparation. The Assignment List is normally prepared by the Resources Unit, using guidance from the Incident Objectives (ICS 202-CG), Operational Planning Worksheet (ICS 215-CG), and the Operations Section Chief. The Assignment List must be approved by the Planning Section Chief and Operations Section Chief. When approved, it is included as part of the Incident Action Plan (IAP). Specific instructions for specific resources may be entered on an ICS 204a-CG for dissemination to the field. A separate sheet is used for each Division or Group. The identification letter of the Division is entered in the form title. Also enter the number (roman numeral) assigned to the Branch.

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Distribution. The Assignment List is duplicated and attached to the Incident Objectives and given to all recipients of the Incident Action Plan. In some cases, assignments may be communicated via radio/telephone/fax. All completed original forms MUST be given to the Documentation Unit.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Operational Period	Enter the time interval for which the form applies.
3.	Branch	Enter the Branch designator.
4.	Division/Group/Staging	Enter the Division/Group/Staging designator.
5.	Operations Personnel	Enter the name of the Operations Chief, applicable Branch Director, and Division Supervisor.
6.	Resources Assigned	Each line in this field may have a separate Assignment List Attachment (ICS 204a-CG). Enter the following information about the resources assigned to Division or Group for this period:
	Identifier	List identifier
	Leader	Leader name
	Contact Information	Primary means of contacting this person (e.g., radio, phone, pager, etc.). Be sure to include area code when listing a phone number.
	# Of Persons	Total number of personnel for the strike team, task force, or single resource assigned.
	Reporting Info/Notes/ Remarks	Special notes or directions, specific to this strike team, task force, or single resource. Enter an "X" check if an Assignment List Attachment (ICS 204a-CG) will be prepared and attached. The Planning and Operations Section Chiefs determine the need for an ICS 204a-CG during the Operational Planning Worksheet (ICS 215-CG) development.
7.	Work Assignment	Provide a statement of the tactical objectives to be achieved within the operational period by personnel assigned to this Division or Group.
8.	Special Instructions	Enter a statement noting any safety problems, specific precautions to be exercised, or other important information.
9.	Communications	Enter specific communications information (including emergency numbers) for this division /group. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205-CG). Note: Phone numbers should include area code.
10.	Prepared By	Enter the name of the person completing the form, normally the Resources Unit Leader.
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).
11.	Reviewed by (PSC)	
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).
12.	Reviewed by (OSC)	Enter the name of the operations person reviewing the form, normally the Operations Section Chief.
	Date/Time	Enter date (month, day, year) and time prepared (24-hour clock).

1. Incident Name Dominguez Mystery Oil Spill	2. Operational Period (Date / Time) From: 12/23 To: 12/24	**MEDICAL PLAN** **ICS 206-CG**

3. Medical Aid Stations

Name	Location	Contact #	Paramedics On site (Y/N)

4. Transportation

Ambulance Service	Address	Contact #	Paramedics On board (Y/N)
South County Medical Transport	228 E. Pacific Coast Hwy, Long Beach	562-599-0659	Y

5. Hospitals

Hospital Name	Address	Contact #	Travel Time		Burn Ctr?	Heli-Pad?
			Air	Ground		
Pacific Hosp. of LB	2776 Pacific Ave, Long Beach CA 90806	562-997-2000		24	N	N

6. Special Medical Emergency Procedures

NONE

7. Prepared by: (Medical Unit Leader) F. Bizzell	Date/Time 12/23	8. Reviewed by: (Safety Officer) F.Bizzell	Date/Time 12/23

Dominguez Channel Mystery Oil Spill
U.S. Environmental Protection Agency, Region 9
Emergency Response Section
Consolidated Site-Specific Health & Safety Plan

This Consolidated Site-Specific Health and Safety Plan (HASP) is for use on U.S. Environmental Protection Agency (USEPA) emergency response actions to incorporate the individual site safety plans of the USEPA, other participating government agencies, the Superfund Technical Assessment and Response Team (START) contractor, the Emergency and Rapid Removal Service (ERRS) contractor, and other subcontractors into a unified site safety plan. This plan is designed to conform with the requirements pursuant to 29 Code of Federal Regulations (CFR) 1910.120(b)(4) by summarizing the hazards on-site, personal protective equipment issues and emergency procedures and incorporating all applicable corporate and government agency safety plans and SOPs by reference. This plan does not supersede any individual entity's safety program plans as mandated by 29 CFR 1910.120(b), site specific safety plans or other standard operating procedures (SOPs). Individual corporations or government agencies should refer to their internal site safety program plan and site specific safety plan for compliance with their safety requirements.

All entities that participate in this plan acknowledge that they comply with the relevant sections of 29 CFR 1910.120, 29 CFR 1910 Subpart I, 29 CFR 1910.146 and 29 CFR 1910 Subpart Z. This plan meets the requirements pursuant to 40 CFR 300.135(l) and 300. 150. Requirements pursuant to 29 CFR 1910.146: Permit Required Confined Space (PRCS) will be addressed in a separate document prepared by the contractor making the PRCS entry.

Plan Acceptance/Approval:

_____ USEPA On-Scene Coordinator Date	_____ USCG PST Date
_____ START Project Manager Date	_____ Double Barrel Environmental Date
_____ ERRS Project Manager Date	_____ Ancon Marine Date
_____ CADFG OSPR Date	_____ Date

A. SITE INFORMATION, ROLES AND RESPONSIBILITIES

Site Name: Dominguez Channel Mystery Oil Spill
Site Address: 1926 E. Pacific Coast Highway, Wilmington, California
Date of Activities: December 21, 2010 - End
Participants: ☒ USEPA ☒ START ☒ ERRS ☒ PST ☐ Other **(Individual site safety plans in Appendix C)**

Table A-1
Site Roles/Responsibilities

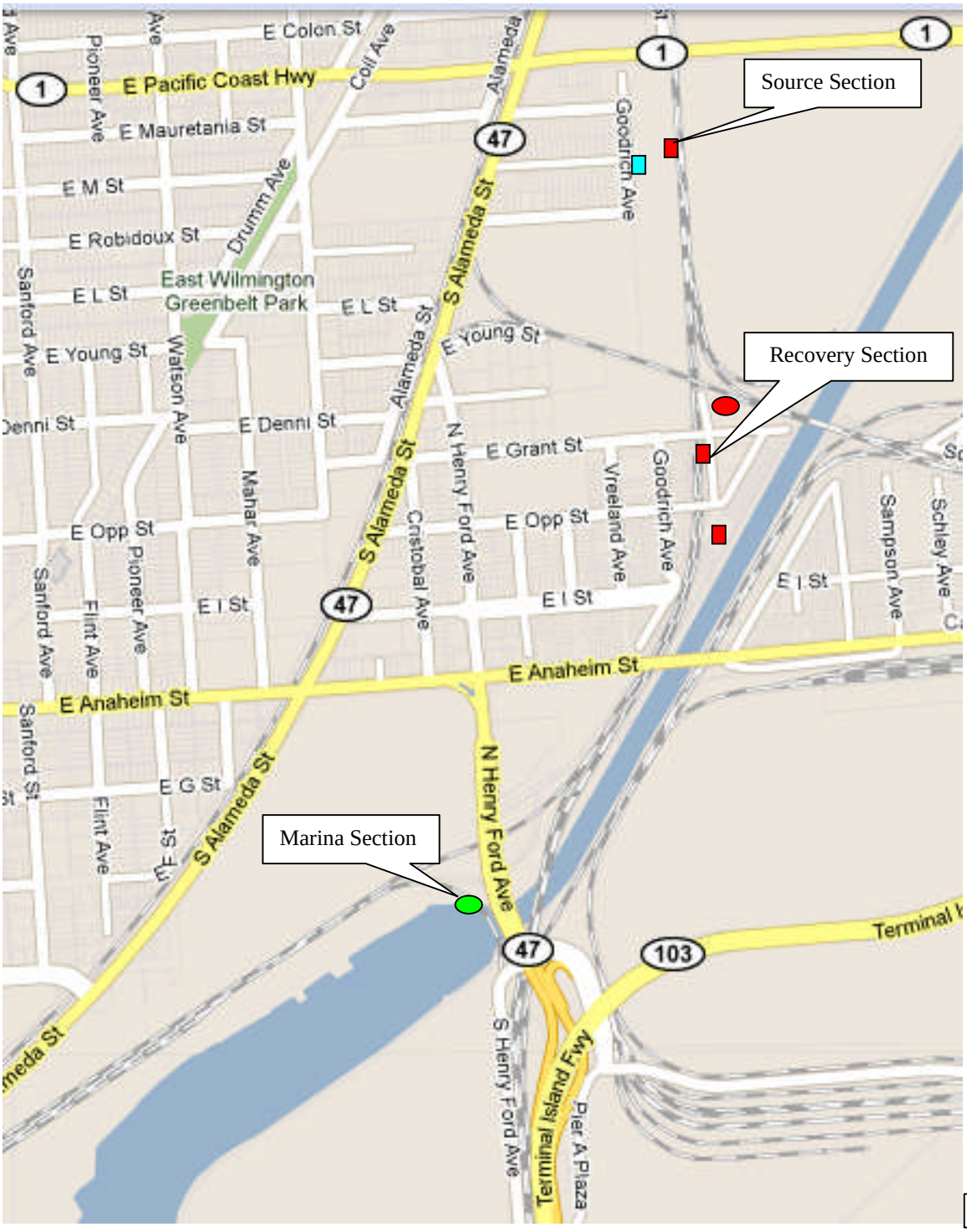
Site Role/Responsibility	Agency / Entity	Name	Title
USEPA-Unified Command	USEPA - ERS	Jason Musante	FOSC
CADFG OSPR-Unified Command	CADFG OSPR	Bryan Gollhofer	Lieutenant
Site Safety Officer	USCG PST		
START Project Manager	Ecology and Environment, Inc.	Adam Smith	START Member
START Safety Officer	Ecology and Environment, Inc.	Adam Smith	START Member
ERRS Response Manager	EQM, Inc.	Gary Wofford	Regional Manager
USEPA ERRS Contractor	Double Barrel Environmental Services	Eric Ricardo	Owner
Shell Oil Contractor	Ancon Marine	Jorge Rodriguez	Foreman

B. SITE CHARACTERIZATION

S

INCIDENT BRIEFING	Incident Name: Dominguez Channel Mystery Oil Spill	Date: 12/21/10	Tim

Map Sketch



Attached Map

Page 1 of	Prepared by (Name and Position): A. Smith, USEPA R9 START

(See Appendix E)

The area is: ☒ predominately commercial ☐ predominately residential ☐ mixed commercial/residential ☐ rural

Site History: The site was discovered after oil was discovered in the Dominguez Channel on or about December 10, 2010. According to available information, Warren E&P was conducting a pressure test on a pipeline extending over the channel. The pressure test failed and approximately 2 barrels of oil leaked into the channel. During the investigation to find a source of the lost oil, a sump located adjacent to the channel was discovered with oil mixed with storm water. The sump is connected by an 8-inch below ground storm pipe connected to a sump located adjacent to the Alameda Corridor railroad line.

Scope of Work: U.S. EPA has tasked START/ERRS to provide assistance with the cleanup of a crude oil spill which was discovered on 12/20/10 adjacent to a railroad right-of-way. A sump located along the Alameda Corridor railroad line is connected to a retention pond and pump station via an 8-inch drain pipe. The drain pipe is exposed for a section adjacent to the retention pond. The site will consist of three areas: Source, recovery, and marina. Source area includes the sump and the crude oil discovered adjacent to the sump, and will consist of Amcon Marine, the Shell Oil cleanup contractor. The recovery area includes the retention pond, exposed 8-inch pipeline and culvert, and the pump station. The recovery area will consist of ERRS/Double Barrel Environmental Services personnel. The marina area includes open water in the Dominguez Channel and the Leeward Marina. The marina area will consist of USCG personnel. START will be responsible for providing technical assistance to the USEPA/CADFG OSPR unified command, conducting health and safety air monitoring, and documentation.

The individual activities that are required to complete the scope of work are divided into numbered tasks. Table B-1 provides a description of each numbered task.

Table B-1 Project Tasks and Task Descriptions	
Task Number	**Task Description**
1	Vacuum crude oil present on ground surface at the source area
2	Vacuum crude oil present discharging from storm water culvert from recovery area
3	Health and safety air/environmental monitoring using a four-gas detector and PID/FID
4	Photo and written documentation
5	Survey/monitor water in Leeward Marina for sheen and/or crude oil
6	Driving to and from different areas

C. EVALUATION AND HAZARD CONTROL

This section identifies and describes safety and health hazards associated with site work. The hazards associated with each task, by site location are identified in the following table(s). Based on the best available knowledge of how that task will be performed, the likelihood of exposure to the hazards identified at that location specified and control measures implemented to protect employees from the hazard. Engineering controls, work practices, personal protective equipment, or a combination of these shall be implemented in accordance with 29 CFR 1910.120(g) to protect employees from exposure to health hazards.

Overall Hazard Summary		
Hazard (low, med, high)	**Task (s)**	**Discussion**
Medium	1	Contact with hazardous substances is possible; contact will be mitigated through use of PPE and work practices.
Medium	2	Contact with hazardous substances is possible; contact will be mitigated through use of PPE and work practices.
Low	3	Contact with hazardous substances is unlikely
Low	4	Contact with hazardous substances is unlikely
Low	5	Contact with hazardous substances is unlikely
Low	6	Contact with hazardous substances is unlikely
Low	7	Contact with hazardous substances is unlikely
Low	8	Contact with hazardous substances is unlikely

Overall Control Measures		
Hazard	**PPE**	**Discussion**
Slip, trip and fall	Steel toe boots	ANSI Z41-1991
	Harness and rope	
Vehicle traffic	High visibility vests	
Inclement weather	Take shelter	

Job Hazard Analysis (JHA)			
JHA Number	**Task**	**Location Where Task Performed**	
1	Vacuum crude oil from source area	Adjacent to sump on Shell Oil property	
Date JHA conducted: 12/21/10 – end		**Date(s) JHA updated:**	
Biological Hazards			
Name of Biological Hazard	**Characteristics**	**Concentration**	**Exposure Potential during Task**
None	☐ Infectious/Pathogenic ☐ Toxic	NA	☐ High ☐ Low ☐ Medium ☐Unknown
Chemical Hazards			
Chemical Name or Type	**Characteristics**	**State/Concentration**	**Exposure Potential during Task**
Crude oil	☒ Flammable / Ignitable ☐ Corrosive ☒Poison / Acutely Toxic ☐ Air/Water Reactive ☒ Carcinogenic ☐ Explosive/Shock Sensitive ☐ Volatile	☐ Gas/ Vapor ☐ Solid ☒ Liquid	☐ High ☐ Low ☒ Medium ☐ Unknown
See Table D-1 for a summary of Chemical information. Chemical Evaluation Sheet or Material Safety Data Sheets (MSDS) are located in Appendix A for known chemical hazards.			
Physical Hazards			
Type of Physical Hazard			**Exposure Potential during Task**
☐ Overhead ☐ Below Grade ☒ Trip/Fall ☐ Burn ☐ Puncture ☐ Cut ☒ Splash ☐ Animal/Insect/Plant ☒ Noise ☐ Heat Stress ☐ Cold Stress ☒ Other - traffic			☐ High ☐ Low ☒ Medium ☐ Unknown
☐ Ionizing Radiation ☐ Alpha Particles ☐ Beta Particles ☐ Gamma Rays ☐ Neutrons			☐ High ☐ Low ☐ Medium ☐ Unknown
☐ Confined Space (Hazards associated with permit required confined space (PRCS) entries will be addressed in separate document prepared by the contractor making the PRCS entry.			☐ High ☐ Low ☐ Medium ☐ Unknown
Control Measures			
Engineering Controls: Sausage boom, sorbent pads, baker tanks, vacuum trucks, sandbags			

Work Practices: (describe those work practices specific to this task or that differ from the general work practices described in Section G)

- Traffic: Wear high visibility vests. Stage vehicles, barricades, cones etc to block vehicle traffic from the work area.
- Slip Trips and fall: Be alert and observe terrain while walking to minimize slips and falls. Wear steel toed boots with steel shanks at least ankle high to provide additional support and stability footwear shall comply with ANSI Z41-1991.
- Operation of air monitoring equipment: Personnel shall be thoroughly familiar with the use, limitations and operating characteristics of the monitoring instruments. Personnel shall be thoroughly familiar with action levels able to compare readings to action levels, and implement required actions including withdrawal and upgrade of PPE. Use intrinsically safe instruments until the absence of combustible gases or vapors is determined.
- Wildlife: If oiled wildlife is observe, contact CADFG OSPR representatives.

PPE D: work boots, hard hat, goggles/face shield, Tyvek coverall and gloves maybe worn to prevent soiling of clothing and hands.

Group	**PPE Level**	**Modifications Allowed**
USEPA	D	
START	D	
ERRS	D	
Double Barrel Environmental, Amcon Marine	D	

Job Hazard Analysis (JHA)			
JHA Number	**Task**	**Location Where Task Performed**	
2	Vacuum crude oil from recovery area	Recovery area	
Date JHA conducted:		**Date(s) JHA updated:**	
Biological Hazards			
Name of Biological Hazard	**Characteristics**	**Concentration**	**Exposure Potential during Task**
None	☐ Infectious/Pathogenic ☐ Toxic	NA	☐ High ☐ Low ☐ Medium ☐Unknown
Chemical Hazards			
Chemical Name or Type	**Characteristics**	**State/Concentration**	**Exposure Potential during Task**
Crude Oil	☒ Flammable / Ignitable ☐ Corrosive ☒Poison / Acutely Toxic ☐ Air/Water Reactive ☒ Carcinogenic ☐ Explosive/Shock Sensitive ☐ Volatile	☐ Gas/ Vapor ☐ Solid ☒ Liquid	☐ High ☐ Low ☒ Medium ☐ Unknown
See Table D-1 for a summary of Chemical information. Chemical Evaluation Sheet or Material Safety Data Sheets (MSDS) are located in Appendix A for known chemical hazards.			
Physical Hazards			
Type of Physical Hazard			**Exposure Potential during Task**
☐ Overhead ☐ Below Grade ☒ Trip/Fall ☐ Burn ☐ Puncture ☐ Cut ☒ Splash ☐ Animal/Insect/Plant ☒ Noise ☐ Heat Stress ☐ Cold Stress ☒ Other - traffic			☐ High ☐ Low ☒ Medium ☐ Unknown
☐ Ionizing Radiation ☐ Alpha Particles ☐ Beta Particles ☐ Gamma Rays ☐ Neutrons			☐ High ☐ Low ☐ Medium ☐ Unknown
☐ Confined Space (Hazards associated with permit required confined space (PRCS) entries will be addressed in separate document prepared by the contractor making the PRCS entry.			☐ High ☐ Low ☐ Medium ☐ Unknown
Control Measures			
Engineering Controls: Sausage boom, sorbent pads, drum skimmer, baker tanks, vacuum trucks, sandbags			

Work Practices: (describe those work practices specific to this task or that differ from the general work practices described in Section G)

- Traffic: Wear high visibility vests. Stage vehicles, barricades, cones etc to block vehicle traffic from the work area.
- Slips, trips and falls: Be alert and observe terrain while walking to minimize slips and falls. Wear steel toed boots with steel shanks provide additional support and stability footwear will comply with ANSI Z41-1991. Remove slip, trip and fall hazards.
- Operation of air monitoring equipment: Personnel shall be thoroughly familiar with the use, limitations and operating characteristics of the monitoring instruments. Personnel shall be thoroughly familiar with action levels able to compare readings to action levels, and implement required actions including withdrawal and upgrade of PPE. Use intrinsically safe instruments until the absence of combustible gases or vapors is determined.
- Wildlife: If oiled wildlife is observe, contact CADFG OSPR representatives.

PPE D: work boots, hard hat, goggles/face shield, Tyvek coverall and gloves maybe worn to prevent soiling of clothing and hands

Group	PPE Level	Modifications Allowed
USEPA	D	
START	D	
ERRS	D	
Double Barrel Environmental, Amcon Marine	D	

Job Hazard Analysis (JHA)			
JHA Number	**Task**	**Location Where Task Performed**	
3	Health and safety air monitoring	All work areas	
Date JHA conducted:		**Date(s) JHA updated:**	
Biological Hazards			
Name of Biological Hazard	**Characteristics**	**Concentration**	**Exposure Potential during Task**
None	□ Infectious/Pathogenic □ Toxic	NA	□ High □ Low □ Medium □Unknown
Chemical Hazards			
Chemical Name or Type	**Characteristics**	**State/Concentration**	**Exposure Potential during Task**

Crude Oil	☒ Flammable / Ignitable ☐ Corrosive ☒Poison / Acutely Toxic ☐ Air/Water Reactive ☒ Carcinogenic ☐ Explosive/Shock Sensitive ☐ Volatile	☐ Gas/ Vapor ☐ Solid ☒ Liquid	☐ High ☒ Low ☐ Medium ☐ Unknown

See Table D-1 for a summary of Chemical information. Chemical Evaluation Sheet or Material Safety Data Sheets (MSDS) are located in Appendix A for known chemical hazards.

Physical Hazards

Type of Physical Hazard	**Exposure Potential during Task**
☐ Overhead ☐ Below Grade ☒ Trip/Fall ☐ Burn ☐ Puncture ☐ Cut ☒ Splash ☐ Animal/Insect/Plant ☒ Noise ☐ Heat Stress ☐ Cold Stress ☒ Other - traffic	☐ High ☒ Low ☐ Medium ☐ Unknown
☐ Ionizing Radiation ☐ Alpha Particles ☐ Beta Particles ☐ Gamma Rays ☐ Neutrons	☐ High ☐ Low ☐ Medium ☐ Unknown
☐ Confined Space (Hazards associated with permit required confined space (PRCS) entries will be addressed in separate document prepared by the contractor making the PRCS entry.	☐ High ☐ Low ☐ Medium ☐ Unknown

Control Measures

Engineering Controls:
None

Work Practices: (describe those work practices specific to this task or that differ from the general work practices described in Section G)

- Traffic: Wear high visibility vests. Stage vehicles, barricades, cones etc to block vehicle traffic from the work area.
- Slips, trips and falls: Be alert and observe terrain while walking to minimize slips and falls. Wear steel toed boots with steel shanks provide additional support and stability footwear will comply with ANSI Z41-1991. Remove slip, trip and fall hazards.
- Operation of air monitoring equipment: Personnel shall be thoroughly familiar with the use, limitations and operating characteristics of the monitoring instruments. Personnel shall be thoroughly familiar with action levels able to compare readings to action levels, and implement required actions including withdrawal and upgrade of PPE. Use intrinsically safe instruments until the absence of combustible gases or vapors is determined.
- Wildlife: If oiled wildlife is observed, contact CADFG OSPR.

PPE D: work boots, hard hat,Tyvek coverall and gloves maybe worn to prevent soiling of clothing and hands

Group	**PPE Level**	**Modifications Allowed**
USEPA	D	
START	D	

ERRS	D	
Double Barrel Environmental, Amcon Marine	D	

Job Hazard Analysis (JHA)			
JHA Number	**Task**	**Location Where Task Performed**	
4	Photo and written documentation of site activities	All work areas	
Date JHA conducted:		**Date(s) JHA updated:**	
Biological Hazards			
Name of Biological Hazard	**Characteristics**	**Concentration**	**Exposure Potential during Task**
None	☐ Infectious/Pathogenic ☐ Toxic	NA	☐ High ☐ Low ☐ Medium ☐Unknown
Chemical Hazards			
Chemical Name or Type	**Characteristics**	**State/Concentration**	**Exposure Potential during Task**
Crude Oil	☒ Flammable / Ignitable ☐Corrosive ☒Poison / Acutely Toxic ☐ Air/Water Reactive ☒ Carcinogenic ☐ Explosive/Shock Sensitive ☐ Volatile	☐ Gas/ Vapor ☐ Solid ☒ Liquid	☐ High ☒ Low ☐ Medium ☐ Unknown
See Table D-1 for a summary of Chemical information. Chemical Evaluation Sheet or Material Safety Data Sheets (MSDS) are located in Appendix A for known chemical hazards.			
Physical Hazards			
Type of Physical Hazard			**Exposure Potential during Task**
☐ Overhead ☐ Below Grade ☒ Trip/Fall ☐ Burn ☐ Puncture ☐ Cut ☒ Splash ☐ Animal/Insect/Plant ☒ Noise ☐ Heat Stress ☐ Cold Stress ☒ Other - traffic			☐ High ☒ Low ☐ Medium ☐ Unknown
☐ Ionizing Radiation ☐ Alpha Particles ☐ Beta Particles ☐ Gamma Rays ☐ Neutrons			☐ High ☒ Low ☐ Medium ☐ Unknown
☐ Confined Space (Hazards associated with permit required confined space (PRCS) entries will be addressed in separate document prepared by the contractor making the PRCS entry.			☐ High ☐ Low ☐ Medium ☐ Unknown
Control Measures			

Engineering Controls:
None

Work Practices: (describe those work practices specific to this task or that differ from the general work practices described in Section G)

- Traffic: Wear high visibility vests. Stage vehicles, barricades, cones etc to block vehicle traffic from the work area.
- Slips, trips and falls: Be alert and observe terrain while walking to minimize slips and falls. Wear steel toed boots with steel shanks provide additional support and stability; footwear will comply with ANSI Z41-1991. Remove slip, trip and fall hazards.
- Operation of air monitoring equipment: Personnel shall be thoroughly familiar with the use, limitations and operating characteristics of the monitoring instruments. Personnel shall be thoroughly familiar with action levels able to compare readings to action levels, and implement required actions including withdrawal and upgrade of PPE. Use intrinsically safe instruments until the absence of combustible gases or vapors is determined.
- Wildlife: If oiled wildlife is observed, contact CADFG OSPR.

PPE D: work boots, hard hat

Group	PPE Level	Modifications Allowed
USEPA	D	
START	D	
ERRS	D	
Double Barrel Environmental, Amcon Marine	D	

Job Hazard Analysis (JHA)			
JHA Number	**Task**	**Location Where Task Performed**	
5	Surface water monitoring of Leeward Marina	Marina	
Date JHA conducted:		**Date(s) JHA updated:**	
Biological Hazards			
Name of Biological Hazard	**Characteristics**	**Concentration**	**Exposure Potential during Task**
None	□ Infectious/Pathogenic □ Toxic	NA	□ High □ Low □ Medium □Unknown
Chemical Hazards			
Chemical Name or Type	**Characteristics**	**State/Concentration**	**Exposure Potential during Task**

Crude oil	☒ Flammable / Ignitable ☐Corrosive ☒Poison / Acutely Toxic ☐ Air/Water Reactive ☒ Carcinogenic ☐ Explosive/Shock Sensitive ☐ Volatile	☐ Gas/ Vapor ☐ Solid ☒ Liquid	☐ High ☒ Low ☐Medium ☐ Unknown

See Table D-1 for a summary of Chemical information. Chemical Evaluation Sheet or Material Safety Data Sheets (MSDS) are located in Appendix A for known chemical hazards.

Physical Hazards

Type of Physical Hazard	**Exposure Potential during Task**
☐ Overhead ☐ Below Grade ☒ Trip/Fall ☐ Burn ☐ Puncture ☐ Cut ☐ Splash ☐ Animal/Insect/Plant ☒ Noise ☐ Heat Stress ☐ Cold Stress ☒ Other - drowning	☐ High ☒ Low ☐ Medium ☐ Unknown
☐ Ionizing Radiation ☐ Alpha Particles ☐ Beta Particles ☐ Gamma Rays ☐ Neutrons	☐ High ☐ Low ☐ Medium ☐ Unknown
☐ Confined Space (Hazards associated with permit required confined space (PRCS) entries will be addressed in separate document prepared by the contractor making the PRCS entry.	☐ High ☐ Low ☐ Medium ☐ Unknown

Control Measures

Engineering Controls:
Life jackets

Work Practices: (describe those work practices specific to this task or that differ from the general work practices described in Section G)

- Traffic: Wear high visibility vests. Stage vehicles, barricades, cones etc to block vehicle traffic from the work area.
- Slips, trips and falls: Be alert and observe terrain while walking to minimize slips and falls. Wear steel toed boots with steel shanks provide additional support and stability; footwear will comply with ANSI Z41-1991. Remove slip, trip and fall hazards.
- Boating: Observe no wake zones, follow applicable navigable protocol, and follow boat captain instructions.
- Wildlife: If oiled wildlife is observed, contact CADFG OSPR.

PPE D: work boots, hard hat, Tyvek coverall and gloves maybe worn to prevent soiling of clothing and hands

Group	**PPE Level**	**Modifications Allowed**
USCG PST	D	.

Job Hazard Analysis (JHA)			
JHA Number	**Task**	**Location Where Task Performed**	
6	Driving to and from work areas	All work areas	
Date JHA conducted:		**Date(s) JHA updated:**	

Biological Hazards			
Name of Biological Hazard	**Characteristics**	**Concentration**	**Exposure Potential during Task**
None	☐ Infectious/Pathogenic ☐ Toxic	NA	☐ High ☐ Low ☐ Medium ☐ Unknown

Chemical Hazards			
Chemical Name or Type	**Characteristics**	**State/Concentration**	**Exposure Potential during Task**
Crude oil	☒ Flammable / Ignitable ☐ Corrosive ☒Poison /Acutely Toxic ☐ Air/Water Reactive ☒ Carcinogenic ☐ Explosive/Shock Sensitive ☐ Volatile	☐ Gas/ Vapor ☐ Solid ☒ Liquid	☐ High ☒ Low ☐ Medium ☐ Unknown

See Table D-1 for a summary of Chemical information. Chemical Evaluation Sheet or Material Safety Data Sheets (MSDS) are located in Appendix A for known chemical hazards.

Physical Hazards	
Type of Physical Hazard	**Exposure Potential during Task**
☐ Overhead ☐ Below Grade ☐ Trip/Fall ☐ Burn ☐ Puncture ☐ Cut ☐ Splash ☐ Animal/Insect/Plant ☐ Noise ☐ Heat Stress ☐ Cold Stress ☒ Other - traffic	☐ High ☒ Low ☐ Medium ☐ Unknown
☐ Ionizing Radiation ☐ Alpha Particles ☐ Beta Particles ☐ Gamma Rays ☐ Neutrons	☐ High ☐ Low ☐ Medium ☐ Unknown
☐ Confined Space (Hazards associated with permit required confined space (PRCS) entries will be addressed in separate document prepared by the contractor making the PRCS entry.	☐ High ☐ Low ☐ Medium ☐ Unknown

Control Measures

Engineering Controls:
None

Work Practices: (describe those work practices specific to this task or that differ from the general work practices described in Section G)

- Driving: Drive safely, observe all speed limits and traffic signals; do not use cell phone while driving.

PPE D: work boots, hard hat

Group	PPE Level	Modifications Allowed
USEPA	D	
START	D	
ERRS	D	
Double Barrel Environmental, Amcon Marine	D	

D. CHEMICAL HAZARDS

Table D-1 Chemical Compound Information Summary							
Compound	Exposure Limits			IDLH Level	Route(s) of Exposure	Acute Symptoms	Odor Threshold/ Description
	PEL	REL	TLV				
Hydrogen Sulfide	10 ppm (28 mg/m^3)	10 ppm (14 mg/m^3)	10 ppm (14 mg/m^3)	100 ppm (140 mg/m^3)	Skin, Inhalation	Irritation eyes, respiratory system; apnea, coma, convulsions; conjunctivitis, eye pain, lacrimation (discharge of tears), photophobia (abnormal visual intolerance to light), corneal vesiculation; dizziness, headache, lassitude (weakness, exhaustion), irritability, insomnia; gastrointestinal disturbance	NA
Petroleum Distillates (Naphtha)	100 ppm (400 mg/m^3)	100 ppm (400 mg/m^3)	NA	1,000 ppm (4,500 mg/m^3)	Skin, Ingestion, Inhalation	Irritation eyes, skin, nose; dizziness, drowsiness; dermatitis; in animals: liver, kidney damage	NA

Note: Use and asterisk (*) to indicate known or suspected carcinogens.
NA = Not available.

E. ACTION LEVELS AND HEALTH AND SAFETY MONITORING

Delete information for biological agents not of concern at the site.

Table E-1 Site-Specific Action Levels				
Contaminant	**Level**	**Action**	**Level**	**Action**
Hydrogen Sulfide	5 ppm (7 mg/m^3)	Upgrade to level C		
Petroleum Distillates (Naphtha)	50 ppm (200 mg/m^3)	Upgrade to level C		

Table E-2 General Action Levels				
Contaminant	**Level**	**Action**	**Level**	**Action**
Oxygen	19.5% - 22%	Level D or C	< 19.5% > 22%	Upgrade to Level B Flammable atmosphere, withdraw & ventilate
Lower Explosive Limit (LEL)	< 10 % of LEL	Level D or C, continuous monitoring	> 10% of LEL	Flammable atmosphere, withdraw & ventilate

Unknown Organic Vapors/Gases	Background to 1part per million (ppm) 1 ppm to ≤ 5 ppm	Level D with continuous monitoring Level C with continuous monitoring	> 5 ppm to ≤ 500 ppm >500 ppm	Level B with continuous monitoring Level A with continuous monitoring

1. Based on 2,000 hour work year and 100 millirem exposure for general population. (Source: 10 CFR Subpar D 20.1301). Radiation levels in excess of background is neither expected nor anticipated.

F. DECONTAMINATION PROCEDURES

All equipment, materials, and personnel will be evaluated for contamination upon leaving the exclusion area. Equipment and materials will be decontaminated and/or disposed and personnel will be decontaminated, as necessary. Decontamination will be performed in the contamination reduction area or any designated area such that the exposure of uncontaminated employees, equipment, and materials will be minimized. Specific procedures are described below.

Table F-1
Decontamination Procedures:

Type	**Responsible Entity**
Personnel: PPE will be removed in the order and manner described in the *Guidelines for Removal of Protective Clothing* RAG. Disposable PPE will be directed to the proper waste stream. Contaminated spots identified on nondisposable PPE, including respirators and hard hats, will be decontaminated using controlled dry or damp methods (e.g. towelettes) Respirators may also be directed to the respirator washing station for full decontamination. Contaminated areas on the skin or body will be decontaminated using controlled dry or damp methods (e.g. towelettes). All contamination incidents on the skin or body will be documented in the Personnel Decontamination Form (Appendix C).	EPA/START/ERRS /Double Barrel Environmental/ Amcon
Equipment/Instruments:	EPA/START/ERRS /Double Barrel Environmental/ Amcon
Emergency Decon: Non Life Threatening Life Threatening	EPA/START/ERRS / Double Barrel Environmental/ Amcon
Waste Management:	ERRS

G. SITE CONTROL

Work Zones: Draw site map indicating work zones.

(See Appendix E, residence specific)

Buddy System: All on-site personnel shall comply with the buddy system. The buddy system will be maintained on a line-of-sight basis.

Work Practices and Site Control Measures Common to All Site Tasks: The exclusion zone and contamination reduction zone (CRZ) will be clearly marked and access to it restricted to those personnel directly involved with the response operations.

1. Entry and exit corridors leading to the CRZ will be clearly marked.
2. Exclusion and CRZ zone entry and egress protocols will be established prior to any entry to these zones.
3. Prior to entering the exclusion zone and CRZ, personnel will know their specific tasks for the entry.
4. Personnel will enter and exit the exclusion zone only through designated corridors, which are located in and traverse the CRZ, unless emergency exiting of the facility is required.
5. Be aware of any stray dogs transients in and around the CRZ.

Communications:

1. On-Site Radio Frequencies: Determined during on site safety meeting
2. Cell Phone #: Cell phones do not work at this site
3. Hand Signals: Use appropriately

Illumination: All work will be conducted during daytime operational period unless sufficient artificial lighting in compliance with 29 CFR 1910.120(m) has been provided.

Sanitation: All work sites will be in compliance with the requirements pursuant to 29 CFR 1910.120(n).

Housekeeping:

1. Provide adequate storage space for site equipment and supplies.
2. Assign time and responsibilities for daily clean-up prior to departure from site.
3. Ensure lunch areas are maintained free of empty bottle, containers and paper. Provide trash receptacles with enclosed tops/covers in the designated lunch area and throughout site as necessary.
4. Do not accumulate flammable or combustible liquids on floors, walls, etc. Spill must be cleaned immediately.
5. Provide adequate lighting in and around all work areas, passageways, stairs and ladders. Keep all such areas clear of debris, supplies, and any other objects.
6. Mark and/or secure any object (extension cord) which must traverse a passageway.
7. Ensure that supplies are stored in neat stockpiles and that access aisles are created and kept clear of stored objects.
8. Remove combustible materials routinely, do not allow accumulation in areas where flammable and combustible liquids are stored, handled or processed.

Vehicular Travel:

1. All drivers must be appropriately licensed when operating a vehicle.
2. All traffic rules and regulations, and all traffic control signs and devices shall be followed.

3. Drivers of rental or unfamiliar vehicles should become familiar with all controls before operating the vehicle.
4. Drivers should operate vehicles defensively, exercise special care when operating on unfamiliar roads or during inclement weather, and should yield to pedestrians.
5. Trucks should be backed under the direction of a signal person when operator cannot view rear area clearly.
6. Seat belts should be provided and used by each individual in the vehicle.
7. Personnel must not ride on outside or back of vehicles.
8. Materials should be loaded within limits of vehicle weight capacity, should be secured, and should not protrude from rear of truck.
9. Personnel may not remain in or on vehicles being loaded by excavating equipment unless cab is adequately protected against impact.
10. Maintain road flares, fire extinguishers, first aid kits, and other safety equipment where necessary.

Rain and Electrical Storms:

1. May increase risk of hypothermia
2. Rain repellant outer gear should be worn by employees. An additional change of clothing should be maintained for removal and replacement of wet clothing.
3. Rest breaks shall be taken in a warm, sheltered area (van, trailer, nearby commercial space).
4. Work areas where water may accumulate and create additional slip/trip/fall hazards should be provided with drainage or barriers.
5. Employees should maintain and increase awareness of their physical surrounding, particularly when operating or when working around heavy equipment.
6. At the first sign of lightning cease work, seek enclosed shelter. Work will not resume outside until 30 minutes after the last sight of lightning.

Industrial Hygiene/Personnel Monitoring

Individual entity's safety program plans shall address industrial hygiene/personnel monitoring based on potential exposure, regulations and enterprise policy. Anticipated sampling may include: Naphtha by NIOSH 1550 and Hydrogen Sulfide by NIOSH 6013.

H. TRAINING/MEDICAL SURVEILLANCE

Check all that apply:

Table H-1
Personnel Training and Surveillance Requirements

Regulation	USEPA	START	ERRS	Other
29 CFR 1910.120(e)(3)(i): General Site Worker - 40 hr	✓	✓	✓	✓
29 CFR 1910.120(e)(3)(ii): Occasional Worker - 24 hr				
29 CFR 1910.120(e)(3)(iii): Workers in Area <PEL - 24 hr				
29 CFR 1910.120(e)(4): Management & Supervisors - 40/8 hr	✓	✓	✓	✓
29 CFR 1910.120(e)(7): Emergency Response	✓	✓	✓	✓

29 CFR 1910.120(e)(8): Refresher - 8 hr	✓	✓	✓	✓
First Responder Awareness				
First Responder Operational - 8 hr				
Hazmat Technician - 24 hr				
Hazmat Specialist- 24 hr				
On-Scene Commander - 24 hr				
29 CFR 1910.134: Resp. Std.	✓	✓	✓	✓
29 CFR 1910.146: PRCS				
29 CFR 1910.120(f): Medical Surveillance Participation	✓	✓	✓	✓
8-Hour General Radiation Training	✓	✓	✓	✓
Radiation Exposure Surveillance - External Dosimetry (TLD Badge and/or electronic dosimeters)	✓	✓	✓	✓

29 CFR 1910.120(e)(3)(i): General Site Worker - 40 hr does not directly apply to this operation. However, it is being required because many elements of the regulation are applicable for this response.

I. EMERGENCY RESPONSE PLAN

This section contains additional information pertaining to on-site emergency response and does not duplicate pertinent emergency response information contained in earlier sections of this plan (e.g., site layout, monitoring equipment, etc.). Emergency response procedures will be rehearsed regularly (prior to initiation of site activities and at least weekly there after), as applicable, during project activities.

Section I.1 Emergency Responsibilities

Section I.1.1 All Personnel: All personnel shall be alert to the possibility of an on-site emergency; report potential or actual emergency situations directly to supervision or to the FOSC, SSO and RSO; When practicable, the lead Federal official on-site will make the decision to declare a site emergency and notify appropriate emergency resources, as necessary.

Section I.1.2 Entry Team Leader: The team leader will determine the emergency actions to be performed by site personnel and will direct these actions. The team leader also will ensure that applicable incidents are reported to appropriate project personnel and the FOSC. The FOSC will determine what other government agency notifications are required.

Section I.1.3 SSO: The SSO will recommend health/safety and protective measures appropriate to the emergency. The SSO is authorized to terminate all activities deemed to be unsafe. In the case of an emergency, the SSO shall call 911 or designated someone to call 911.

Section I.1.4 RSO: The RSO is responsible for all radiation safety issues. If emergency decontamination is required, the RSO shall supervise.

Section I.1.5 FOSC: The FOSC has overall responsibility for all emergency operations. The FOSC shall interface with all rescue personnel.

On-Site Emergency Signal:
1) Air horn or vehicle horn for emergencies which occur at a specific residence
2) Verbal notification via radio to crew leader for emergencies which affect overall operations

On-Site Meeting Location:
EPA/START/ERRS staging location, may change daily

Emergency Egress Route Off-Site:
Specific to location of work crew, possible area hospitals are located in Appendix B

Off-Site Meeting Location:
To be determined, based on location of crews

Emergency Decontamination Procedures:
None required

Company/Resource	Name Contact	Telephone Numbers
USEPA	Region Response Center Harry Allen, ERS Chief OSC: Jason Musante	(415) 947-4400 (415) 972-3075 (Office) (415) 218-7406 (Cell) (213) 479-2120 (Cell)
START	Adam Smith Maggie Tymkow Matt Diener	(310) 405-2393 (Cell) (310) 701-0836 (Cell) (310) 310-0267 (Cell) (562) 997-1200 (Office)
ERRS	RM: Gary Wofford RM: Ron McManamy	(916) 739-1366 (Office) (714) 269-5979 (Cell) (425) 673-2900 (206) 279-1935
Hospital (Route Map Appendix B)	Varies, see Appendix B	
Poison Control Center	California	(800) 876-4766
Police		911
Fire		911

Participant Acknowledgment Sheet

Name	Organization	Date

Appendix A: Chemical Hazard Sheets

Appendix B: Hospital Map(s)

Appendix C: Participants Site Safety Plans

Appendix D: Action Level Calculations/Justification

Action Level Calculations/Justification

Assuming that 0.1% (1000 mg/kg) of the ash is cadmium personnel could be exposed up to 500 μg/m3 to reach the PEL. Adding a 50% safety factor average Total Suspended Particulate (TSP) exposure below 250 μg/m3 would be acceptable based on these assumptions. Levels reported in the Assessment of Burned Debris Report Cedar Fire and Paradise Fire Areas San Diego County, California GeoSyntec Consultants February 2004 were an order of magnitude below this level.

Radiation

Two times background, not to exceed 50 microrem per hour. Based on 2000 hour work year and 100 millirem exposure for general population. (Source 10 CFR Subpart D 20.1301. If greater than 2 times background, contact health physicist.

PAHs

The Occupational Safety and Health Administration (OSHA) limit for Polynuclear Aromatic Hydrocarbons (Coal Tar Pitch) is 0.2 milligrams per cubic meter of air (0.2 mg/m3) or 200 micrograms per cubic meter (μg/ m3).

Alpha Radiation from Americium

The radiation source in smoke detectors is a small disc, about 3 to 5 millimeters in diameter, weighing about 0.5 gram. It is a composite of americium-241 in a gold matrix. The average activity in a smoke detector source is approximately one microcurie.

Americium emits alpha particles and low energy gamma rays. It has a half-life of about 432 years. EPA estimates that as long as the radiation

source stays in the detector, exposures would be negligible (less than about 1/100 of a millirem per year). Additionally, even if the radiation source were removed from the detector, exposure would be minimal because alpha particles do not travel very far or penetrate most materials; additionally the gamma rays emitted by americium are relatively weak.

Appendix E: Site Maps

NFPA 704 (Section 16)

AMERADA HESS CORPORATION

MATERIAL SAFETY DATA SHEET

Crude Oil (Sour) **MSDS No. 6608**

1. CHEMICAL PRODUCT and COMPANY INFORMATION (rev. Jan-99)

Amerada Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

EMERGENCY TELEPHONE NUMBER (24 hrs): **CHEMTREC** **(800) 424-9300**
COMPANY CONTACT (business hours): Corporate Safety (732) 750-6000

SYNONYMS: Crude Petroleum; Sour Crude

See Section 16 for abbreviations and acronyms.

2. COMPOSITION and INFORMATION ON INGREDIENTS (rev. Jan-99)

INGREDIENT NAME	EXPOSURE LIMITS	CONCENTRATION PERCENT BY WEIGHT
Petroleum Oil CAS NUMBER: 8002-05-9	OSHA PEL-TWA: 5 mg/m^3 as mineral oil mist ACGIH TLV-TWA: 5 mg/m^3 as mineral oil mist* *1997 NOIC: sum of 15 NTP-listed polynuclear aromatic hydrocarbons 0.005 mg/m^3, A1	100
Hydrogen Sulfide (H_2S) CAS NUMBER: 7783-06-4	OSHA PEL-Ceiling/Peak: 20 / 50 ppm ACGIH TLV-TWA/STEL: 10 / 15 ppm	< highly variable - see below >
Benzene CAS NUMBER: 71-43-2	OSHA PEL-TWA/STEL: 1 / 5 ppm ACGIH TLV-TWA: 0.5 / 2.5 ppm, A1, skin US Coast Guard: same as OSHA	Variable AP 0.1 to 1.0

A natural product derived from various oil production field primarily consisting of a complex combination of paraffinic and aromatic hydrocarbons and small amounts of nitrogen and sulfur compounds.

Crude oils are generally referred to as "sour" if they can release dissolved hydrogen sulfide (H_2S) which could result in a hazardous condition. The amount of dissolved H_2S can vary considerably with the crude oil source. Some sour crude oils can have an appreciable percentage of H_2S.

3. HAZARDS IDENTIFICATION (rev. Jan-99; Tox 99)

EMERGENCY OVERVIEW
CAUTION!
FLAMMABLE LIQUID - MAY EVOLVE TOXIC AND FLAMMABLE HYDROGEN SULFIDE GAS - SLIGHT TO MODERATE IRRITANT - EFFECTS CENTRAL NERVOUS SYSTEM - HARMFUL OR FATAL IF SWALLOWED

High fire hazard. Keep away from heat, spark, open flame, and other ignition sources.

HYDROGEN SULFIDE (toxic gas) may be released. High concentration may cause immediate unconsciousness - death may result unless victim is promptly and successfully resuscitated. Hydrogen sulfide causes eye irritation.

If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs). Contact may cause eye, skin and mucous membrane irritation. Avoid prolonged breathing of vapors or mists. Inhalation may cause irritation, anesthetic effects (dizziness, nausea, headache, intoxication), and respiratory system effects.

Long-term exposure may cause effects to specific organs, such as to the liver, kidneys, blood, nervous system, and skin. Contains benzene, which can cause blood disease, including anemia and leukemia.

EYES
Contact with eyes may cause moderate to severe irritation.

SKIN
Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are exposed repeatedly. Rare, precancerous warts on the forearms, backs of hands and scrotum have been reported from prolonged or repeated skin contact.

INGESTION
The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

INHALATION
Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: Irritating and toxic hydrogen sulfide gas may be found in confined vapor spaces. Greater than 15 - 20 ppm continuous exposure can cause mucous membrane and respiratory tract irritation. 50 - 500 ppm can cause headache, nausea, and dizziness, loss of reasoning and balance, difficulty in breathing, fluid in the lungs, and possible loss of consciousness. Greater than 500 ppm can cause rapid or immediate unconsciousness due to respiratory paralysis and death by suffocation unless the victim is removed from exposure and successfully resuscitated.

The "rotten egg" odor of hydrogen sulfide is not a reliable indicator for warning of exposure, since olfactory fatigue (loss of smell) readily occurs, especially at concentrations above 50 ppm. At high concentrations, the victim may not even recognize the odor before becoming unconscious.

CHRONIC and CARCINOGENICITY
Similar products produced skin cancer and systemic toxicity in laboratory animals following repeated applications. This product contains polynuclear aromatic hydrocarbons which have been shown to be carcinogenic in laboratory animals after repeated and prolonged skin contact. The significance of these results to human exposures has not been determined - see Section 11, Toxicological Information.

Contains benzene, a regulated human carcinogen. Benzene has the potential to cause anemia and other blood diseases, including leukemia, after repeated and prolonged exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash). Pre-existing, chronic respiratory disease, liver or kidney dysfunction, or central nervous system disorders may be aggravated by exposure.

4. FIRST AID MEASURES (rev. Jan-99; Tox-99)

EYES
In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

SKIN
Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and the area of the body burned.

INGESTION

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

INHALATION

Remove person to fresh air. If person is not breathing provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

5. FIRE FIGHTING MEASURES (rev. Oct-94)

FLAMMABLE PROPERTIES:

FLASH POINT:	< 73 to > 200 ^{o}F (< 23 to > 93 ^{o}C)
AUTOIGNITION TEMPERATURE:	N/D
OSHA/NFPA FLAMMABILITY CLASS:	1B (flammable liquid)
LOWER EXPLOSIVE LIMIT (%):	N/D
UPPER EXPLOSIVE LIMIT (%):	N/D

FIRE AND EXPLOSION HAZARDS

Flash point and explosive limits are highly dependent on the crude oil source. Treat as an OSHA/NFPA flammable liquid unless otherwise indicated. Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

EXTINGUISHING MEDIA

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or Halon.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

FIRE FIGHTING INSTRUCTIONS

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

See Section 16 for the NFPA 704 Hazard Rating.

6. ACCIDENTAL RELEASE MEASURES (rev. Jan-99)

ACTIVATE FACILITY'S SPILL CONTINGENCY OR EMERGENCY RESPONSE PLAN.

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Hydrogen sulfide may be evolved during a release - ensure response personnel are adequately protected - see Section 8.

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system

is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors.

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Response and clean-up crews must be properly trained and must utilize proper protective equipment.

7. HANDLING and STORAGE (rev. Jan-99)

HANDLING PRECAUTIONS

Handle as a flammable liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

STORAGE PRECAUTIONS

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

Hydrogen sulfide may accumulate in tanks and bulk transport compartments. Consider appropriate respiratory protection (see Section 8). Stand upwind. Avoid vapors when opening hatches and dome covers. Confined spaces should be ventilated prior to entry.

WORK/HYGIENIC PRACTICES

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use gasoline or solvents (naphtha, kerosene, etc.) for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

Naturally Occurring Radioactive Materials (NORM):

Industry experience indicates that this material may contain small amounts of naturally-occurring uranium, thorium, and their decay products (NORM) which can accumulate in oil production and process equipment, particularly the equipment handling the water associated with crude oil production. Scales, other deposits, and sludges from this equipment may have a significant accumulation of NORM. Gamma radiation above background may be detected external to equipment contaminated with NORM. Production equipment should be assessed for external gamma radiation; access may need to be restricted in accordance with OSHA 29 CFR 1910.96 during operation. Such equipment should also be assumed to be internally contaminated with long half-life decay products that emit alpha radiation, which is a hazard if inhaled or ingested. Unless measurements indicate otherwise, steps should be taken to minimize skin and inhalation exposure to NORM dusts/mists by wearing personal protective clothing [such as disposable Tyvek ® (DuPont)], utilizing respiratory protection (minimum of HEPA filter), and practicing good personal hygiene. Please refer to API Bulletin E2, “Bulletin on Management of Naturally Occurring Radioactive Materials in Oil and Gas Production,” April 1, 1992, for additional information on managing NORM.

8. EXPOSURE CONTROLS and PERSONAL PROTECTION (rev. Jan-99)

ENGINEERING CONTROLS

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

EYE/FACE PROTECTION
Safety glasses or goggles are recommended where there is a possibility of splashing or spraying

SKIN PROTECTION
Gloves constructed of nitrile, neoprene, or PVC are recommended. Chemical protective clothing such as of E.I. DuPont Tyvek QC®, Saranex®, TyChem® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information

RESPIRATORY PROTECTION
If a hydrogen sulfide hazard is present (that is, exposure potential above H_2S permissible exposure limit), use a positive-pressure SCBA or Type C supplied air respirator with escape bottle.

Where it has been determined that there is no hydrogen sulfide exposure hazard (that is, exposure potential below H_2S permissible exposure limit), a NIOSH/ MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL and CHEMICAL PROPERTIES (rev. Oct-94)

APPEARANCE
Variable depending on its source; typical is a thick, dark yellow to brown or greenish black liquid

ODOR
A characteristic, petroleum/asphalt-type odor

Hydrogen sulfide (H_2S) has a rotten egg “sulfurous” odor. This odor should not be used as a warning property of toxic levels because H_2S can overwhelm and deaden the sense of smell. Also, the odor of H_2S in heavy oils can easily be masked by the petroleum-like odor of the oil. Therefore, the smell of H_2S should not be used as an indicator of a hazardous condition - a H_2S meter or colorimetric indicating tubes are typically used to determine the concentration of H_2S.

BASIC PHYSICAL PROPERTIES
The properties of crude oil are highly variable depending on its source.

BOILING RANGE:	AP 100 - 1000+ ^oF (> 260 ^oC)
VAPOR PRESSURE:	Variable
VAPOR DENSITY (air = 1):	3 - 5 typical
SPECIFIC GRAVITY (H_2O = 1):	AP 0.7 to 0.9 (varies)
PERCENT VOLATILES:	Variable
EVAPORATION RATE:	Variable
SOLUBILITY (H_2O):	Insoluble to slightly soluble

10. STABILITY and REACTIVITY (rev. Oct-94)

STABILITY: Stable. Hazardous polymerization will not occur.

CONDITIONS TO AVOID and INCOMPATIBLE MATERIALS
Material is stable under normal conditions. Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Keep away from strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS:
Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

11. TOXICOLOGICAL PROPERTIES (rev. Jan-99; Tox-99)

CHRONIC EFFECTS AND CARCINOGENICITY

Carcinogenicity: **OSHA:** NO **IARC:** NO **NTP:** NO **ACGIH:** 1997 NOIC: A1
Dermal carcinogenicity: positive - mice

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH.

MUTAGENICITY (genetic effects)

Some crude oils and crude oil fractions have been positive in mutagenicity studies.

12. ECOLOGICAL INFORMATION (rev. Jan-99)

Keep out of sewers, drainage and waterways. Report spills and releases, as applicable, under Federal and State regulations.

13. DISPOSAL CONSIDERATIONS (rev. Jan-99)

Consult federal, state and local waste regulations to determine appropriate disposal options.

14. TRANSPORTATION INFORMATION (rev. Jan-99)

PROPER SHIPPING NAME:	PETROLEUM CRUDE OIL
HAZARD CLASS; PACKING GROUP:	3; determine flash point to accurately classify packing group
DOT IDENTIFICATION NUMBER:	UN 1267
DOT SHIPPING LABEL:	FLAMMABLE LIQUID

15. REGULATORY INFORMATION (rev. Jan-99)

U.S. FEDERAL, STATE and LOCAL REGULATORY INFORMATION

This product and its constituents listed herein are on the EPA TSCA Inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other regulations at the state and/or local level. Consult those regulations applicable to your facility/operation.

CLEAN WATER ACT (OIL SPILLS)

Any spill or release of this product to "navigable waters" (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) or, if not practical, the U.S. Coast Guard with follow-up to the National Response Center, as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a “petroleum exclusion” clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

SARA SECTION 311/312 - HAZARD CLASSES

ACUTE HEALTH	CHRONIC HEALTH	FIRE	SUDDEN RELEASE OF PRESSURE	REACTIVE
X	X	X	--	--

SARA SECTION 313 - SUPPLIER NOTIFICATION

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372:

INGREDIENT NAME (CAS NUMBER)	CONCENTRATION WT. PERCENT
Benzene (71-43-2)	0.1 to 1.0

CANADIAN REGULATORY INFORMATION (WHMIS)

Class B, Division 2 (flammable liquid)
Class D, Division 1A (Very toxic, acute)
Class D, Division 1B (Very toxic by other means)

16. OTHER INFORMATION (rev. Feb-00)

NFPA® HAZARD RATING	HEALTH:	2	Moderate
	FIRE:	3	High
	REACTIVITY:	0	Negligible
HMIS® HAZARD RATING	HEALTH:	3*	High
	FIRE:	3	High
	REACTIVITY:	0	Negligible
			*Chronic

SPECIAL HAZARDS: May release toxic hydrogen sulfide (poison gas).

SUPERSEDES MSDS DATED: 01/27/99

ABBREVIATIONS:

AP = Approximately < = Less than > = Greater than
N/A = Not Applicable N/D = Not Determined ppm = parts per million

ACRONYMS:

ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American Industrial Hygiene Association
ANSI	American National Standards Institute (212) 642-4900
API	American Petroleum Institute (202) 682-8000
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation [General Info: (800)467-4922]
EPA	U.S. Environmental Protection Agency
HMIS	Hazardous Materials Information System
IARC	International Agency For Research On Cancer
MSHA	Mine Safety and Health Administration
NFPA	National Fire Protection Association (617) 770-3000
NIOSH	National Institute of Occupational Safety and Health
NOIC	Notice of Intended Change (proposed change to ACGIH TLV)
NTP	National Toxicology Program
OPA	Oil Pollution Act of 1990
OSHA	U.S. Occupational Safety & Health Administration
PEL	Permissible Exposure Limit (OSHA)
RCRA	Resource Conservation and Recovery Act
REL	Recommended Exposure Limit (NIOSH)
SARA	Superfund Amendments and Reauthorization Act of 1986 Title III
SCBA	Self-Contained Breathing Apparatus
SPCC	Spill Prevention, Control, and Countermeasures
STEL	Short-Term Exposure Limit (generally 15 minutes)
TLV	Threshold Limit Value (ACGIH)
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average (8 hr.)
WEEL	Workplace Environmental Exposure Level (AIHA)
WHMIS	Canadian Workplace Hazardous Materials Information System

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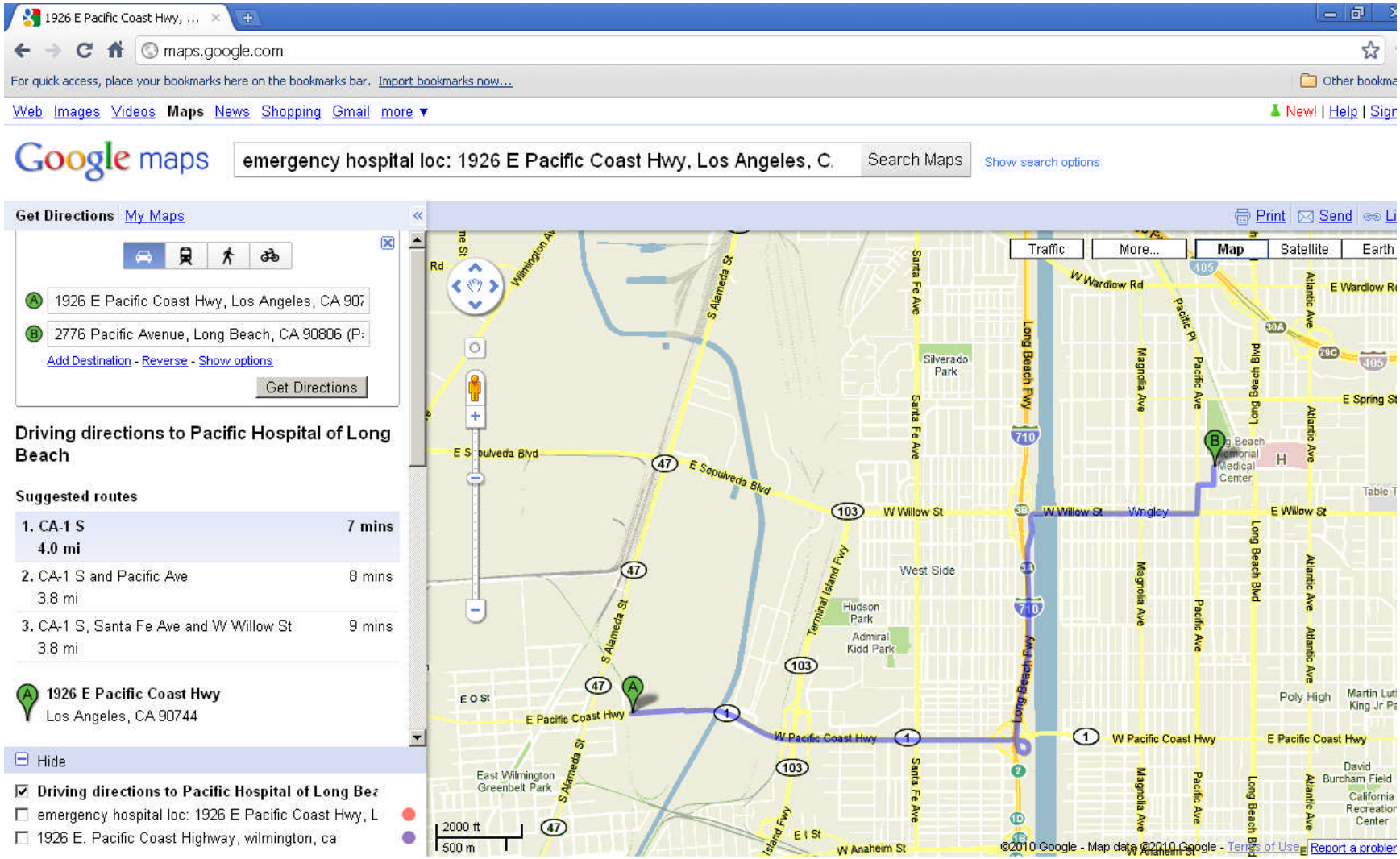
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